

PART 03 — C M L ENGINEERING AND GEOINFORMATICS

(Answer ALL questions)

76. The acceleration of a particle moving along the circumference of a circle with a uniform speed is directed
1. radially
 2. tangentially at the point
 3. away from the center
 4. towards the center
77. The inherent property of a body which offers reluctance to change its state of rest or uniform motion is
1. weight
 2. mass
 3. inertia
 4. momentum
78. A satellite goes on moving along its orbit round the earth due to
1. gravitational force
 2. centrifugal force
 3. centripetal force
 4. none of the above
79. Stress in a beam due to simple bending is
1. directly proportional
 2. inversely proportional
 3. curvilinearly released
 4. none of the above
80. The phenomenon of slow growth of strain under a steady tensile stress is called
1. yielding
 2. creeping
 3. breaking
 4. none of the above
81. Vicats apparatus is used to perform the test of
1. finess
 2. setting time
 3. consistency
 4. compressive strength
82. For M 150 mix concrete, according to I.S. specification local bond stress is
1. 5 kg/cm^2
 2. 10 kg/cm^2
 3. 15 kg/cm^2
 4. 20 kg/cm^2
83. A prestressed concrete member is
1. made of concrete
 2. stressed
 3. made of reinforced concrete
 4. none of the above
84. A column splice is used to increase
1. length of column
 2. strength of column
 3. cross sectional area of column
 4. none of the above
85. The stress in the wall or a thin cylinder subjected to internal pressure is
1. hoop compression
 2. shear
 3. torsional shear
 4. hoop tension
86. The inventor of the term soil mechanic was
1. Kray
 2. Dr. Karl Terzaghi
 3. Laygue
 4. Fellenius
87. Pycrometer is used to determine
1. void ratio
 2. dry density
 3. watercontent
 4. density index

88. The co-efficient of compressibility of soil is the ratio of
1. stress to strain
 2. strain to stress
 3. stress to settlement
 4. rate of loading to that of settlement
89. The ultimate bearing capacity of soil is
1. total load on the bearing area
 2. safe load on the bearing area
 3. load at which soil fails
 4. load at which soil consolidates
90. Under reamed piles are generally
1. driven piles
 2. bored piles
 3. precast piles
 4. all of the above
91. The unit of Kinematic viscosity is
1. m^2/sec
 2. newton sec per m^2
 3. newton - sec^2 per m^3
 4. m^2 per sec
92. From a nozzle exposed to atmosphere, the liquid jet traverses along
1. a straight line
 2. a circular path
 3. an elliptical path
 4. a parabolic path
93. The standard height of a standard rain gauge is
1. 10 cm
 2. 20 cm
 3. 30 cm
 4. 50 cm
94. The formula $V = 4001 (D_{10}^2 / 4)$ used for determining the velocity of groundwater flow in meter per day is known as
1. Meinzer's formula
 2. Slichter's formula
 3. Darcy's formula
 4. Hazen's formula
95. For the estimate of high floods in fan - shaped catchment, the formula used is
1. Dicken's formula
 2. Ryves formula
 3. English formula
 4. None of the above
96. A circular sewer section is preferred to other shapes because
1. it is cheaper in construction
 2. it provides a maximum area for a given perimeter
 3. it provides maximum hydraulic mean depth
 4. all of the above
97. The coagulant widely used for sewage treatment is
1. alum
 2. ferricchloride
 3. ferric sulphate
 4. chlorinated sulphur
98. The maximum pressure to which a pipe is subjected to during its operation is known as
1. working pressure
 2. design pressure
 3. test pressure
 4. pipe pressure
99. For controlling the algae, the most commonly used chemical is
1. copper sulphate
 2. alum
 3. lime
 4. bleaching powder

100. The most commonly used chemical for dechlorination of water is
1. sodium thiosulphate
 2. sodium bisulphate
 3. sodium sulphate
 4. all of the above
101. The boundary of water of a still lake, represents a
1. level surface
 2. horizontal surface
 3. contour line
 4. concave surface
102. Removal of parallax may be achieved by
1. refocusing the objective
 2. refocusing the eye-piece
 3. refocusing the objective and eye piece
 4. none of the above
103. International date line is located along
1. Standard meridian
 2. Greenwich meridian
 3. Equator
 4. 180° longitude
104. The position of the sun when its north declination is maximum is known as
1. Vernal equinox
 2. Autumnal equinox
 3. Summer solstice
 4. Winter solstice
105. Triangulation surveys are carried out for providing
1. planimetric control
 2. height control
 3. both planimetric and height control
 4. none of the above
106. If no super elevation is provided on a road along curves pot holes may develop at
1. Inner edge of the road
 2. Outer edge of the road
 3. Centre of the road
 4. No where on the road
107. The length of transition curve is governed by
1. rate of change of radial acceleration
 2. rate of change of super-elevation
 3. both (1) and (2)
 4. neither (1) nor (2)
108. The basic formula for the determination of thickness of pavements was first suggested by
1. Spangler
 2. Picket
 3. Kelly
 4. Gold beck
109. Maximum wheel base distance provided on Indian B.G. track is
1. 4.096 m
 2. 5.096 m
 3. 6.096 m
 4. 7.096 m
110. The spike commonly used to fix rails to wooden sleepers in Indian railway is
1. dog spike
 2. screw spike
 3. round spike
 4. all of the above

111. The relation between the air base (B) photographic base (b) flying height (H) and the focal length (f) of a vertical photograph is
1. $B = bH / f$
 2. $B = f / bH$
 3. $B = b / fH$
 4. $B = H / bf$
112. The rotation of the aircraft about 'Y' axis is designated by the letter
1. 'w' is sometimes called 'roll'
 2. 'Φ' is sometimes called 'pitch'
 3. 'z' is sometimes called 'swing'
 4. none of the above
113. The satellite launched by USA is
1. IRS — 1C
 2. SPOT
 3. ERS
 4. Landsat
114. The spatial resolution of IRS — IC PAN satellite data is
1. 23.5 m
 2. 36.25 m
 3. 5.8 m
 4. 20 m
115. During the cloud, the satellite sensor used to take observation is
1. optical sensor
 2. microwave sensor
 3. both optical and microwave sensor
 4. none of the above
116. The vector data base structure used in GIS is
1. Network database structure
 2. Hierarchical data structure
 3. relational data base structure
 4. all of the above
117. Data used to study the details of data available in GIS environment is called
1. relational data base
 2. oracle
 3. meta data
 4. **Informix**
118. The input device used to enter the data in GIS environment is
1. scanner
 2. digitizer
 3. key board
 4. all of the above
119. GIS is used for
1. urban planning
 2. utility planning
 3. disaster management
 4. all of the above
120. The two data models used in GIS are
1. TIN model and **grinded** DEM
 2. DEM and DTM
 3. Raster and vector
 4. None of the above